

**REMARKS**

Claims 1-15 are all the claims pending in the application. Claims 9-14 are withdrawn from consideration as being drawn to a non-elected invention. Claims 1-8 presently stand rejected. Claim 15 is added to further define the invention as discussed in detail below.

The drawings filed October 19, 2001 are objected to by the Examiner; specifically, Fig. 2 lacks the proper cross-hatching of materials. Applicants are enclosing herewith a Request for Approval of Proposed Drawing Corrections to overcome the Examiner's objection.

In addition, the Request for Approval of Proposed Drawing Corrections includes new Figure 4, illustrating a cross-section of Fig. 1, to further clarify the present invention.

Claims 1-8 are rejected under 35 U.S.C. § 112, second paragraph. Applicants amend the claims to remove any ambiguities.

Claims 1-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over La Gase et al. (3,823,255) in view of Arroyo et al. (4,510,348).

**Analysis**

Of the examined claims, claim 1 is the only claim in independent form; therefore, the following discussion is initially directed to this independent claim.

Claim 1 is directed to an insulated electrical conductor, which comprises a metallic conductor, a first layer and a second plastic layer. The first layer is made of at least two longitudinally introduced tapes which are applied to the conductor, and the width of the tapes is

such that each of the tapes overlaps itself by at least 50%. The first layer is made of at least one of glass and mica.

Although it is well known to improve the flame resistance of electric cables by using inorganic dielectric materials instead of organic dielectric material, well known glass fiber tapes or so called mica tapes are helically wound to the cable conductors. Helically winding is a time consuming process in cable technology.

In the new cable of the present invention, the glass-fiber and/or mica tapes are longitudinally formed around the conductor each tape having an overlap of at least 50%. By this it is possible to produce **three** flame retardant layers with only **two** tapes of the flame retardant material. This is illustrated in new Fig. 4 showing a cross-sectional view of the insulated conductor.

US Patent 3,923,255 (La Gase) discloses a flame retardant insulated conductor, comprising a conductor 11 and a layer of inorganic tape which may be applied longitudinally. La Gase is silent with respect to an overlap of at least 50% and a second layer of inorganic material with an overlap of at least 50%, too, which is applied to the first layer. La Gase describes an intermediate layer 13 of polymeric material, which will burn in the case of fire. There is no overlap shown either in Fig. 1 or 2. The strip 13 is not at all helically wound to the outer layer of inorganic material but to the outside of the cable core.

US Patent 4,510,348 (Arroyo) teaches a fire resistant plenum cable comprising several conductors 22 with a plastic insulation 23. The several plastic insulated conductors are housed in

a sheath system, which comprises a layer of inorganic cellular material and several layers of plastic tapes. In Fig. 1 the plastic tapes 41, 42 are **helically** wound around the inner sheath 31.

In column 4, lines 27-30 it is cited, that the **inner** layer 31 of the sheath system is wrapped about the core of PVC insulated conductors to form a longitudinal overlapped seam 32 which has a width of 0.64 cm  $\cong$  6.4 mm. There is no mention of an overlap of 50% or more.

In column 5 lines 13-17 there is described that the plastic tapes 41, 42 are **helically** wrapped with an overlap of about 50% of the **prior** wrap. This is totally different from the 50% overlap of the tapes 2 and 3 of the present invention. As shown in Fig. 8 of Arroyo the outer plastic layers of the sheath system overlap but the overlap does not result in a three-layer wrapping as in the present invention using only two tapes.

Finally, Applicants add claim 15 to clarify that when only two tapes are used, at least three layers are obtained. This benefit is discussed above, as being due to the overlapping effects of the tapes. None of the prior art teaches or suggests this feature.

### **Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. No. 09/981,713

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE



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Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Ellen R. Smith', written over a horizontal line.

Ellen R. Smith  
Registration No. 43,042

Date: February 20, 2003

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